Draft Summary Report

Redwood City Transit Center Redesign Study

October 2019
Redwood City Transit Center Redesign Study
Summary Report

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Background

The Transit Center in Downtown Redwood City is a vital hub for regional and local transit services. It is a major stop for the Caltrain system and an important transfer location for SamTrans local and regional bus services. It is also host to a number of public and private shuttle bus services. Additionally, it provides park-and-ride parking for Caltrain and is used as a drop-off/pickup point by private autos, taxis, and Transportation Network Company (TNC) vehicles such as Uber and Lyft.

It is a short walk from the Transit Center to most of the Downtown Area.

Project History

The 2013 Downtown Precise Plan recognized the importance of the Transit Center and presented a vision that “encourages the creation of a model of transit integration, featuring a convenient transit station on display in the center (rather than at the edge) of Downtown, seamlessly connected to Broadway, Courthouse Square, El Camino Real and adjacent neighborhoods.” In recent years, significant new development has occurred adjacent to the Transit Center, moving the center of gravity of land use development closer, so that the Transit Center is no longer on the fringe of Downtown. However, connectivity to the Transit Center from nearby land uses still remains an issue.

In 2016, the City obtained a Caltrans grant to investigate ways of making the city’s Downtown Transit Center more efficient and better connected to its surroundings. This grant was used to fund this feasibility and redesign study.
access features of the Transit Center underlies the need to consider the redesign of the facility.

**Figure 1** depicts the layout and components of the Transit Center. It is located to the southwest of the Caltrain tracks and straddles Broadway. It includes the Caltrain Station, a bus transfer station, and three parking areas, one of which is in the Sequoia Station retail complex parking garage. Transit vehicle access to the bus station is via James Avenue which connects directly to El Camino Real and to Broadway via California Street. A lot of passenger pick-up and drop-off activity also occurs on the Winslow Street frontage to the Caltrain Station.

**Project Goals**

The primary goal of the Transit Center Redesign Study is to investigate ways to improve the visual, pedestrian, and other connections to the station, as well as increasing the efficiency of the center’s layout and design. It is intended that these improvements would result in:

- Increased use of public transportation and ease of travel
- Further enhancement of the City center as an important local and regional hub for business, entertainment, cultural resources, medical needs, and government
- New economic and social benefits
- Improve bicycle and pedestrian access to the station
- Reduced vehicle miles of travel and greenhouse gas emissions consistent with the goals of the City’s General Plan and recently adopted RWCmoves, the Citywide Transportation Plan.
Figure 1: Location and Components of the Existing Transit Center
Study Description

The City initiated this effort to conduct a planning/urban design study to develop both short-term and long-term concepts for improvements to the Transit Center. The scope of services identifies the following as areas of focus for the study:

- The functionality of the Transit Center in terms of transit access
- Regional and local transit connectivity
- Traffic circulation, pedestrian/bicycle circulation, and parking
- Consistency with other plans and programs
- Amenities for transit users
- Visual identity and wayfinding features
- Linkages to the Downtown and the adjacent areas
- Relationships to adjacent green spaces and open public spaces
- Compatibility with existing and future land uses
- Conceptual layout plans for improving the function of the Transit Center

- Provisions to adapt to future changes in terms of the amount of bus transit and rail services to be accommodated, as well as other types of services such as the proposed streetcar/circulator project

This study was conducted simultaneously with the streetcar/circulator feasibility study as both were funded under a single Caltrans grant.
Existing Conditions

A comprehensive inventory and review of the existing conditions in and around the Transit Center was conducted. The review included existing transit services, parking, bicycle and pedestrian facilities, land use and zoning, Transit Center amenities, circulation of buses, pedestrian circulation, and wayfinding/signage.

Based on the 2018 SamTrans and the 2019 Caltrain Ridership Reports, the Downtown Transit Center accommodates about 4,200 rail and 2,200 bus passenger boardings and alightings each weekday. The rail station is the fifth busiest on the Caltrain system in both passenger ridership and bike usage; the bus station handles about 20% of the existing SamTrans service. The average weekday bicycle ridership at Redwood City Caltrain Station in 2019 was 351 bicycles. The Center accommodates these crowds in a generally efficient manner, but there is room for improvement. Architectural and wayfinding elements are not what would be expected in such a strategic transit hub. The boarding locations of complementary services like shuttles and ride-hailing are not defined. Moreover, the circulation of buses is hampered by the bottleneck that can occur at the Center’s main vehicular portal on James Avenue and by poor circulation within the bus station.

Existing Transit Services

The station is served by 38 Caltrain trains in each direction on weekdays and 12-14 trains in each direction on weekends. Trains depart from the northbound platform of the station from about 5:00 a.m. to 11:00 p.m. on weekdays, 7:45 a.m. to 11:00 p.m. on Saturdays, and 8:45 a.m. to 9:45 p.m. on Sundays.

The bus station was served by 14 different SamTrans bus routes in 2017, which has been reduced to 12 routes in 2019 (see Table 1). Of these, ten terminate and layover at the Center, while the remaining two (ECR, and 397) are through routes that continue on to other termini. One route (95) operates only on school days and another (278) only on Saturdays. Several routes operate only on weekdays or offer...
limited service levels. Most routes provide service every 30 to 60 minutes, but two routes (ECR and 296) offer 15-minute weekday service and one route (ECR Rapid) offers 20-minute weekday service. In total, some 328 bus trips passed through the center on an average weekday, while 163 trips served the center on Saturdays, and 139 trips on Sundays.

Parking
There are three parking areas which provide a total of 533 spaces for Transit Center users at a cost of $5.00 per day. While the main station lot typically fills up each weekday, the other two facilities, the Perry Street lot and the underground parking in the Sequoia Station garage, do not fill up and on average 59% is the peak weekday occupancy of the parking.

Transit Center Amenities
The Transit Center is lacking in passenger amenities and overall urban design, visual quality, and adequate pedestrian and bicycle access. The bus station was designed without much consideration of architectural integration with the Caltrain Station. It is an uninviting environment especially for pedestrians. All the buildings adjacent to the Transit Center with the exception of the new Box office building, show their undecorated back or side walls to those using the Center. Nearby creekside green space along James Avenue and the public space on Broadway are not integrated into the Transit Center site. Signage and wayfinding are inconsistent, and the Transit Center is not well identified from El Camino Real. The 2017 Caltrain Bike Parking Management Plan indicated that the Transit Center lacks sufficient secure bicycle storage. Bike lockers are located north of Broadway in the Perry Street parking lot, somewhat removed from the station.

Pedestrian circulation is difficult along the Winslow Street frontage of the Transit Center, as a railing limits access to the Caltrain platform. Many people walk through this area to reach Broadway, conflicting with passengers waiting to board trains on the narrow platform. There is a key pedestrian crossing of the tracks in this area that is also the linkage between the Downtown and the bus station and Sequoia Station which are both on the opposite side of the tracks. The design of the bus station allows pedestrians to cross bus bays in a random pattern which poses safety issues, and SamTrans reported that there had been a recent pedestrian fatality at the station.

Land Use and Zoning
The area directly surrounding the Transit Center is for the most part dedicated to streets and parking, and thus to automobiles. Commercial uses surround the Transit Center study area, and while Broadway provides a pedestrian-oriented destination, Sequoia Station does not. However, the applicable development regulations lay the foundation for a more transit-supportive built environment surrounding the Transit Center if and when properties redevelop in the future. The proposed redevelopment of the Sequoia Station commercial property represents a significant opportunity to
correct the pedestrian access and circulation issues, as well as to provide a major first step in the goal of integrating the Transit Center with the surrounding urban development, as envisioned in the Downtown Precise Plan.

<table>
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<tr>
<th>Route</th>
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<td>Alameda/ Ralston</td>
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<td>Cañada College</td>
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<td>ECR</td>
<td>Redwood City Transit Center</td>
<td>Daly City BART</td>
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**Existing Conditions Summary**

The existing conditions assessment of the Transit Center results in a number of important findings:
**Transit Access:** the Transit Center is a key local and sub-regional hub for Caltrain and SamTrans, as well as for several public and private shuttles

**Pick-ups and Drop-offs:** the advent of Transportation Network Company (TNC) ride-sharing services such as Uber and Lyft has resulted in a significant increase in the need for areas to pick-up and drop-off passengers

**Transfers:** a relatively small number of passengers transfer between bus and rail, and also between bus lines

**Bus Circulation:** the existing bus transit center layout creates conflicts between buses and pedestrians, and buses are delayed going in and out from El Camino Real

**Caltrain Platform:** the northeast side of the platform is narrow and not well connected to the adjacent street, so pedestrian circulation is impaired

**Pedestrian Circulation:** the existing at-grade pedestrian crossings of the Caltrain tracks not only serve Transit Center patrons, they also link the Sequoia Station retail center with the rest of the Downtown, an important connection which is currently difficult

**Parking:** Sequoia Station underground parking is underutilized, as is the Perry Street lot

**Land Use:** the surrounding land uses turn their back to the Transit Center, creating a stark environment and lack of connection. Poor integration with adjacent public spaces poses a safety issue it limits eyes on the space

**Development Opportunities:** potential redevelopment of Sequoia Station as prescribed in the Downtown Precise Plan is a major opportunity for improved Transit Center visibility and linkages to the surrounding areas

**Amenities:** facilities are aged, and wayfinding/Transit Center identity is lacking particularly from the El Camino Real side of the Center

**Planned Regional Transit Service Expansion:** implementation of the recommended alternative in the Caltrain Business Plan, California high-speed rail and the Dumbarton Rail Corridor project would potentially require 4 tracks in Redwood City station and/or moving the Caltrain platform north of Broadway to accommodate longer trains and cross platform transfers

**Opportunities:** there are many short term and longer term opportunities for improving the Transit Center in terms of its function, urban design, and integration with the surrounding community
Entrance to the Sequoia Station parking

Desired Outcomes
Based on the key findings, there is a need to plan for:

- Increased SamTrans bus services
- Increased Caltrain train frequency and the possible addition of high-speed rail and Dumbarton Rail Corridor services
- Improved and safer pedestrian crossings of the Caltrain tracks and within the bus transfer center
- More efficient bus circulation
- Improved/expanded bicycle storage facilities
- More area for passenger pick-up and drop-off for use by TNC vehicles, taxis and the general public
- Improved pedestrian circulation and access along the Winslow Street frontage and the connection to Broadway
- Possible connection to a Downtown Streetcar/Circulator
- Updated Transit Center amenities and signage/wayfinding
- Possible redevelopment of the Sequoia Station complex and better integration with the land uses surrounding the site

Public and Stakeholder Outreach
Outreach and public involvement were an important element in the Transit Center Redesign Study. The City had several planning studies occurring in the same time frame including the:

- Streetcar/Urban Circulator Feasibility Study
- El Camino Real Corridor Plan
- Citywide Transportation Plan (RWChemoves) and Transportation Demand Management (TDM) Plan
To avoid confusing the public and to make it easier for people to participate, some of the public meetings and events were consolidated.

Public Meetings
Three meetings were held:

- **November 16, 2017, 5 to 8 p.m.** workshop in conjunction with outreach for RWCmoves at the PAL Building
- **November 29, 2017, 5 to 8 p.m.** workshop in conjunction with outreach for RWCmoves at Redwood Shores Library
- **December 9, 2017, 10 a.m. to 1 p.m.** workshop in conjunction with outreach for RWCmoves at Kennedy Middle School

Other Meetings:
- **June 1, 2018, 2:30 to 3:30 p.m.** meeting with large employers in Redwood City
- **November 8, 2018, 12 p.m.** Redwood City Improvement Association
- **June 11, 2019, 6 p.m.** Redwood City Transportation Advisory Committee
- **April 25, 2019, North Fair Oaks Community Council Meeting**

Stakeholder Meetings
During the course of the project there were four meetings with representatives from both Caltrain and SamTrans, involving both facilities planning and operations staff. The first meeting included a walking tour of the site. There were also meetings with some of the property owners with parcels adjacent to the Transit Center site, to get input on their plans and their views on how best to improve the Transit Center.

Online Survey
In late 2016, an online survey was conducted to obtain information from the public about:

- How people currently use El Camino Real and the Transit Center (Caltrain & SamTrans)
Priorities for improvements

- Other suggestions and comments

Over 340 responses were received. Common themes included:

- Most people arrive at the station by walking or driving
- Convenience and frequency of trains are high priorities
- Top station improvements include safety, cleanliness, and sheltered waiting area
- Improved pedestrian and vehicular access from El Camino Real are key considerations

Design Alternatives

A number of alternatives for the redesign of the Transit Center were developed and considered. Two timeframes were assumed for making changes:

- **Phase 1 – Short Term**: low-cost improvements that could be done in the immediate future
- **Phase 2 – Long Term**: major redesign, two types of options:
  - (1) further improvements at the existing site, and
  - (2) relocation of the Transit Center in the event that the Caltrain platform is moved north to
accommodate possible expanded Caltrain service, California high-speed rail and Dumbarton Rail Corridor service.

Existing Transit Center Site Configuration

The existing Transit Center site configuration is shown in Figure 2. Today, the Center includes:

- Eleven\(^1\) SamTrans bus routes using seven bus bays for both boarding/alighting and layovers
- Drive-through bus configuration
- Clockwise bus circulation which creates sharp turns
- Pedestrian/bus conflicts in the bus station area
- Difficult access between north and south sides of the Caltrain platform via at-grade crossings at the north and south ends of the platform
- Poor relationship with the surrounding buildings, green spaces and public spaces
- Difficult access for buses from El Camino Real and conflicts with vehicles entering the underground parking at Sequoia Station
- Difficult circulation and access for pedestrians along the Winslow Street side of the station

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\(^1\) The number of routes was reduced from 13 to eleven in 2019 as a part of a SamTrans system restructuring.
Figure 2: Existing Transit Center Site Configuration – Looking Northeast from El Camino Real
Phase 1 – Short Term: Existing Transit Center Site

For the existing Transit Center site, the project team explored a circular arrangement using modified sawtooth bays recessed into the loading area to save space and ease the in and out maneuver for transit operators as shown in Figure 3. In this configuration, buses would stop along the two edges of the circle defining the bus turning area. The outer edge of this circle is where most of the bus stops would be located, thereby allowing many of them to be contiguous with the Caltrain southbound rail platform. In this way, bus passengers could walk to and from trains and shuttles, as well as Downtown Redwood City, without having to cross the path of circulating buses. In order for the doors of the bus to face the bus stop, buses using these bays would circulate in a counter-clockwise direction. To remedy the problem of tight turns faced by bus drivers in the earlier counter-clockwise design, more generous turn radii were used in the design. In the Phase 1 design (Figure 3), seven bays could fit around the outer edge of the circulation area (including one on Winklebleck Street and one on the southeast side of the circle near the intersection of James Avenue). To provide more bays for flexibility, another three would be located along the inside edge of the loop (served by buses making clockwise movements through the Transit Center), resulting in a total of ten bays.

The center of the circle would be available for several possible activities. For example, it could be landscaped as a park or used as the site of a bike station or snack bar. Likewise, the area just northwest of the loop, near Arguello Plaza and the party rental store, could be enlivened as a café with outdoor seating.

This concept includes:

- Ten bus bays – to allow for future expansion for both boarding/alighting and layovers
- Clockwise bus circulation and center island to eliminate tight turns
- A design which reduces pedestrian/bus conflicts
- The creation of green spaces and better linkages to surrounding areas
- The removal of barriers to pedestrian circulation along the Winslow Street and Broadway frontages to the Transit Center
- Displacement of approximately 50 parking spaces from the existing 90 space station parking lot. Parking users would need to use available surplus station parking in the Sequoia Station underground parking structure.
Figure 3: Phase 1 – Short Term: Existing Transit Center Site Improvements
Phase 2 – Long Term: Existing Transit Center Site

In Phase 2 (Figure 4), the loop could be enlarged by reconfiguring mainly its easterly portion. This could only be done if Sequoia Station were redeveloped and the existing truck loading docks adjacent to James Avenue removed. The center island of the Transit Center could then be squared off, permitting more space along its perimeter for buses to stop and more room for activities within the island. With this reconfiguration, one bay on the outer edge of the bus loop would be shifted to the inner edge, and one additional bay would be added to the inner edge. The net impact would be the addition of one new bus bay, making a total of eleven in the Transit Center.

This configuration results in a larger green space island in the bus station area and improves the circulation on James Avenue which is currently a major source of delay for the buses.

In summary, the long term concept offers the following:

-  ▪ Sequoia Station redevelopment allows for larger island, improved circulation
-  ▪ Eleven bus bays – good for future expansion of SamTrans services for both boarding/alighting and layovers
-  ▪ Clockwise bus circulation and center island that eliminates tight turns
-  ▪ A layout that reduces pedestrian/bus conflicts in the bus station
-  ▪ The creation of green spaces and better linkages to surrounding areas
-  ▪ Opportunities for additional redevelopment adjacent to the Transit Center
-  ▪ Displacement of the existing 90 space station parking lot. Parkers would need to use station parking in the Sequoia Station parking structure (assumes that station parking will continue to be part of the Sequoia Station development)
Figure 4: Phase 2 – Long Term: Existing Transit Center Site Improvements
Perry Street Site: Current Configuration

If the Caltrain Business Plan’s recommended alternative, high-speed rail, or Dumbarton Rail Corridor service were to be implemented, the current platform space is inadequate.

Additional tracks and platform area would be needed at the Caltrain Station. Conceptual design studies conducted by Caltrain have determined that one solution to this problem would be relocating the current Caltrain platform north of Broadway to the site of the existing Caltrain Lot adjacent to Perry Street to accommodate the expanded services.

Figure 5: Perry Street and Caltrain Parking Lot Configuration – View from the Arguello Street Side of the Site
Phase 2 – Long Term: Perry Street Site

For the long-term option in which the Caltrain station would be shifted a block north, the bus station would also be moved to Perry Street. This street is currently adjacent to a transit patron parking lot (Figure 5) that would be transformed to the Caltrain station area (Figure 6). Between Brewster Avenue and Commercial Way, Perry Street would be reserved for the two-way flow of buses, with other traffic prohibited. The left-most lane in each direction would accommodate moving buses, while each curb lane would provide space for bus stops. Those stops along the curb adjacent to the Caltrain station would use a modified sawtooth design; along the opposite curb, buses would stop parallel to the sidewalk in the conventional manner. As in the Phase 2 design for the existing Transit Center site, eleven bus bays could be accommodated.

Although the Perry Street site is approximately one block further from the Downtown core than the existing Transit Center, it has the advantage of a consolidated configuration with the buses located immediately adjacent to the Caltrain platform. Arguello Street would provide a convenient location for passenger drop-off and pick-up and would also be a viable location for the terminus of the proposed streetcar/urban circulator. In summary, the features of a relocated Transit Center on the Perry Street site include:

- Adequate space to accommodate Caltrain Business Plan’s recommended alternative, Dumbarton Rail Corridor project, and high-speed rail
- All transit functions occur in one area
- A new linear bus transit center relocated to Perry Street which provides eleven bus bays for both boarding/alighting and layovers
- A drop-off area for taxis and TNC vehicles on Arguello Street
- Potential for a bicycle and pedestrian undercrossing between two sides of the tracks
- The existing Transit Center site can be redeveloped
- Creates opportunities for new development on the Perry Street side of the Transit Center
- Displaces the existing 135 parking space on Perry Street Caltrain parking lot. Assumes the bus portion of the Transit Center, including the 90 space parking lot, would be redeveloped. Station parking at Sequoia Station would be well removed from the new Transit Center. A new parking facility would be desirable in the area south of Arguello Street, adjacent to the Transit Center.
Figure 6: Phase 2 – Long-Term: Perry Street Site
Conclusions

Based on the analyses and the conceptual design studies conducted as part of the study, as well as the input received from the stakeholders (Caltrain, SamTrans, and nearby property owners/businesses) and the general public, redesigning the Redwood City Downtown Transit Center is feasible and realistic from a physical site planning and functional standpoint. All the proposed redesign options would result in a more efficient operation. Space can be created for bus layovers, bus-pedestrian conflicts can be reduced, and areas can be enlarged for activities that will enliven the Transit Center. The improved Transit Center would fulfill the vision of the Downtown Precise Plan, becoming an integral part of the urban fabric which makes up the Downtown area, and reinforcing its role as a vibrant regional transit hub.

In summary, this study has identified short term and long term improvement concepts for the Transit Center. The key findings include:

- The concepts identified will result in a more efficient operation of the bus station:
  - Increased bus berthing capacity to address future needs including space for bus layovers

- Reduction of bus-pedestrian conflicts addressing current safety concerns

- Pedestrian access and circulation from the surrounding areas and across the Caltrain tracks can be improved for better transit access and better connection to the portions of the downtown on either sides of the tracks

- Public areas can be enlarged for activities that will enliven the Transit Center

- Redevelopment of the immediate surrounding areas will be encouraged

A key decision will be whether or not to relocate the Transit Center to the Perry Street site. Investments should be limited until the status of the Caltrain Business Plan, high-speed rail, and the Dumbarton Rail Corridor project are better understood.

Near Term Actions

In order to continue to advance the project the following near-term actions are recommended:

1. Continue to work closely with Caltrain and SamTrans to implement elements of the short-term plan and to plan for future changes such as Dumbarton Rail Corridor project.
2. Work with the potential Sequoia Station developer to take advantage of this excellent opportunity to enhance the Transit Center and improve the linkages to the rest of the Downtown.

3. Coordinate with the San Mateo County Transportation Authority (SMCTA), Caltrans, and the Metropolitan Transportation Commission regarding funding for both the short-term and long-term improvements.

4. Explore with the SMCTA the opportunity to utilize the 2020-24 Strategic Plan recommendations and use Measure W funding for future phases.